CONTENTS

(Abstracts/Content Lists published in Analytical Abstracts, ASCA, Biochemical Abstracts, Biological Abstracts, Chemical Abstracts, Chemical Titles, Chromatography Abstracts, Current Contents/Physical, Chemical & Earth Sciences, Current Contents/Life Sciences, Deep-Sea Research/Part B: Oceanographic Literature Review, Excerpta Medica, Index Medicus, Mass Spectrometry Bulletin, PASCAL-CNRS, Referativnyi Zhurnal and Science Citation Index)

Correlation for Kováts retention index of C_9–C_{26} monoalkyl and polymethyl alkanes and alkenes
by F. Khorasheh, M. R. Gray and M. L. Selucky (Edmonton, Canada) (Received June 30th, 1989) 1

Thermodynamic properties of enantiomers of underivatized diols *versus* the cyclic carbonates in gas chromatography on Chirasil-Val
by B. Koppenhoefer (Tübingen, F.R.G.) and B. Lin (Dalian, China) (Received May 8th, 1989) 17

Conversion of a conventional packed-column gas chromatograph to accommodate megabore columns. I. Evaluation of the system for organophosphorus pesticides
by C. Mallet and V. N. Mallet (Moncton, Canada) (Received July 5th, 1989) 27

Conversion of a conventional packed-column gas chromatograph to accommodate megabore columns. II. Determination of organophosphorus pesticides in environmental water
by C. Mallet and V. N. Mallet (Moncton, Canada) (Received July 5th, 1989) 37

Gas chromatography of Titan's atmosphere. I. Analysis of low-molecular-weight hydrocarbons and nitriles with a PoraPLOT Q porous polymer coated open-tubular capillary column
by L. Do and F. Raulin (Creteil, France) (Received July 6th, 1989) 45

Detection and quantitation of oxalic acid by capillary gas chromatography
by H. D. Gottstein, M. N. Zook and J. A. Kuć (Lexington, KY, U.S.A.) (Received June 22nd, 1989) 55

Supercritical fluid chromatography of barbiturates
by R. M. Smith and M. M. Sanagi (Loughborough, U.K.) (Received June 30th, 1989) . . 63

Retention prediction of analytes in reversed-phase high-performance liquid chromatography based on molecular structure. III. Monosubstituted aliphatic compounds
by R. M. Smith and C. M. Burr (Loughborough, U.K.) (Received June 30th, 1989) . . . 71

Retention prediction of analytes in reversed-phase high-performance liquid chromatography based on molecular structure. IV. Branched and unsaturated alkylbenzenes
by R. M. Smith and C. M. Burr (Loughborough, U.K.) (Received June 30th, 1989) . . . 85

Free energy correlations: dead volume and the reversed-phase high-performance liquid chromatographic capacity factor in the interaction index model. A discussion and application to a nitrosamine series
by M. Montes, J. L. Usero, A. Del Arco, C. Izquierdo and J. Casado (Salamanca, Spain) (Received July 5th,1989) 97

High-speed analytical sensor for in-line monitoring of dissolved analytes flowing in a tube employing a combination of limited diffusion, laminar flow and plug solvent injections
by C. N. Trumbore, L. M. Jackson, S. Bennett and A. Thompson (Newark, DE, U.S.A.) (Received May 24th, 1989) 111

Optimization in photochemical reaction detection. Application to high-performance liquid chromatography–photolysis–electrochemical detection
by W. J. Bachman and J. T. Stewart (Athens, GA, U.S.A.) (Received June 6th, 1989) . . 121

Temperature-induced changes in reversed-phase chromatographic surfaces. C_8 and C_9 polymeric ligands
by J. W. Carr and J. M. Harris (Salt Lake City, UT, U.S.A.) (Received July 26th, 1989) . 135

(Continued overleaf)

Contents (continued)

Performance of polymer-coated silica C_{18} packing materials prepared from high-purity silica gel. The suppression of undesirable secondary retention processes
by Y. Ohtsu, Y. Shiojima, T. Okumura, J.-I. Koyama, K. Nakamura and O. Nakata (Yokohama, Japan) and K. Kimata and N. Tanaka (Kyoto, Japan) (Received June 27th, 1989) . 147

Preparation and characterization of adsorbents for use in high-performance liquid affinity chromatography
by A. G. Livingston and H. A. Chase (Cambridge, U.K.) (Received July 20th, 1989) . . . 159

High-performance adsorption chromatography of proteins on deformed non-porous agarose beads coated with insoluble metal compounds. I. Coating: ferric oxyhydroxide with stoichiometrically bound phosphate
by S. Hjertén, I. Zelikman, J. Lindeberg, J.-l. Liao, K.-O. Eriksson and J. Mohammad (Uppsala, Sweden) (Received June 30th, 1989) 175

High-performance adsorption chromatography of proteins on deformed non-porous agarose beads coated with insoluble metal compounds. II. Coating: aluminium and zirconium (hydr)oxide with stoichiometrically bound phosphate
by S. Hjertén, I. Zelikman and J. Lindeberg (Uppsala, Sweden) and M. Lederer (Lausanne, Switzerland) (Received June 30th, 1989) 187

Preparation of several types of RPC-5-like resins and their use for the separation of oligonucleotides and mononucleotides by high-performance liquid chromatography
by H. Sawai (Kiryu, Japan) (Received July 3rd, 1989) 201

New ultraviolet labelling agents for high-performance liquid chromatographic determination of monocarboxylic acids
by K. Funazo, M. Tanaka, Y. Yasaka, H. Takigawa and T. Shono (Osaka, Japan) (Received April 14th, 1989) 211

Identification of peptides, from a peptic haemoglobin hydrolysate produced at pilot-plant scale, by high-performance liquid chromatography and mass spectromety
by J.-M. Piot, D. Guillochon, Q. Zhao, G. Ricart and B. Fournet (Villeneuve d'Ascq, France) and D. Thomas (Compiègne, France) (Received June 19th, 1989) 221

The separation of pancreatic procarboxypeptidases by high-performance liquid chromatography and chromatofocusing
by F. J. Burgos, R. Pascual, J. Vendrell, C. M. Cuchillo and F. X. Avilés (Barcelona, Spain) (Received June 7th, 1989) 233

High-performance liquid chromatographic determination of δ-(L-α-aminoadipyl)-L-cysteinyl-D-valine in complex media by precolumn derivatisation with dansylaziridine
by C. D. Orford, D. Perry and M. W. Adlard (London, U.K.) (Received June 20th, 1989) 245

Separation and identification of retinoic acid photoisomers
by M. G. Motto, K. L. Facchine, P. F. Hamburg, D. J. Burinsky, R. Dunphy, A. R. Oyler and M. L. Cotter (Raritan, NJ, U.S.A.) (Received June 21st, 1989) 255

High-performance liquid chromatographic method for isolating coprostanol from sediment extracts
by M. M. Krahn, C.A. Wigren, L. K. Moore and D. W. Brown (Seattle, WA, U.S.A.) (Received June 27th, 1989) 263

Determination of phenoxyacid herbicides in water. Polymeric pre-column preconcentration and tetrabutylammonium ion-pair separation on a PRP-1 column
by R. B. Geerdink, C. A. A. van Balkom and H.-J. Brouwer (Lelystad, The Netherlands) (Received June 26th, 1989) 275

Reversed-phase high-performance liquid chromatography of metal–benzylpropionitrile dithiocarbamate complexes
by Y. J. Park and J. K. Hardy (Akron, OH, U.S.A.) (Received July 18th, 1989) 287

Exchange of the cation and anion of the sample (sodium or potassium chloride) with the cation and anion of the eluent (sodium or potassium phosphate buffer) and their elution, from a Sephadex G-15 column, in separate fractions
by T. Okada, K. Sugata, Y. Nakabayashi, K. Teraoka, M. Miyakoshi and M. Inoue (Ishikawa, Japan) (Received May 12th, 1989) 299

Ion chromatographic elution behaviour and prediction of the retention of inorganic monovalent anions using a phosphate eluent
by M. Maruo, N. Hirayama and T. Kuwamoto (Kyoto, Japan) (Received July 6th, 1989) 315

Determination of trace levels of total carbonate-carbon by indirect photometric ion chromatography with nitrogen purging
by K. Hayakawa, S. Kitamoto, N. Okubo, S. Nakamura and M. Miyazaki (Kanazawa, Japan) (Received May 8th, 1989) 323

Thin-layer chromatographic behaviour of some styryl cyanine dyes derived from pyridine
by L. N. Patnaik, B. N. Pattanaik, M. Mohanty and A. Satapathy (Cuttack, India) (Received June 26th, 1989) 331

Application of free flow electrophoresis to the preparative purification of basic proteins from an *E. coli* cell extract
by R. Kuhn and H. Wagner (Saarbrücken, F.R.G.) (Received June 26th, 1989) 343

Notes

Series of novel flavanones identified by gas chromatography–mass spectrometry in bud exudate of *Populus fremontii* and *Populus maximowiczii*
by W. Greenaway and S. English (Oxford, U.K.), E. Wollenweber (Darmstadt, F.R.G.) and F.R. Whatley (Oxford, U.K.) (Received August 15th, 1989) 352

Determination of anatoxin-a, the neurotoxin of *Anabaena flos-aquae* cyanobacterium, in algae and water by gas chromatography–mass spectrometry
by K. Himberg (Espoo, Finland) (Received May 8th, 1989) 358

Determination of the enantiomeric composition of γ-lactones in complex natural matrices using multidimensional capillary gas chromatography
by A. Bernreuther, N. Christoph and P. Schreier (Würzburg, F.R.G.) (Received June 6th, 1989) 363

Determination of panaxytriol, a new type of tumour growth inhibitor from Panax ginseng, by capillary gas chromatography
by H. Matsunaga, M. Katano, H. Yamamoto, M. Mori and K. Takata (Saga, Japan) and M. Nishi (Osaka, Japan) (Received June 26th, 1989) 368

Determination of tropospheric phosgene and other halocarbons by capillary gas chromatography
by K. Bächmann and J. Polzer (Darmstadt, F.R.G.) (Received June 7th, 1989). 373

Chriral stationary phases via hydrosilylation reaction of N-acryloylamino acids. I. Stationary phase with one chiral centre for high-performance liquid chromatography and development of a new derivatization pattern for amino acid enantiomers
by R. Kuropka, B. Müller, H. Höcker and H. Berndt (Aachen, F.R.G.) (Received July 31st, 1989) 380

Enantiomer separation of α-substituted γ-butyrolactones on the chiral polyacrylamide resin ChiraSpher®
by S. Hünig and N. Klaunzer (Würzburg, F.R.G.) and K. Günther (Hanau, F.R.G.) (Received July 21st, 1989) 387

Recovery of proteins and peptides with nanogram loads on non-porous packings
by Y. Yamasaki, T. Kitamura, S. Nakatani and Y. Kato (Yamaguchi, Japan) (Received June 23rd, 1989) 391

(Continued overleaf)

Contents (continued)

Rapid separation of α-amylases from barley by ion-exchange high-performance liquid chromatography on non-porous columns
by R. J. Henry (Toowoomba, Autralia) (Received July 28th, 1989) 397

Separation of rat liver HSP70 and HSP71 by high-performance liquid chromatography with a hydroxylapatite column
by T. Hatayama, N. Fujio, M. Yukioka, Y. Funae and H. Kinoshita (Osaka, Japan) (Received May 26th, 1989) 403

Separation of homologues of methyl ester and 3-O-acetyl methyl ester derivatives of the corynomycolic acid fraction from *Corynebacterium pseudotuberculosis*
by T. Ioneda (São Paulo, Brazil) (Received July 18th, 1989) 411

Isolation of the aromatic heptaenic antibiotics trichomycin A–F by high-performance liquid chromatography
by T. Komori and Y. Morimoto (Osaka, Japan) (Received July 4th, 1989) 416

Reversed-phase high-performance liquid chromatographic assay for camptothecin and related alkaloids
by B. L. Poehland, N. Troupe, B. K. Carté and J. W. Westley (King of Prussia, PA, U.S.A.) (Received July 20th, 1989) 421

Reversed-phase ion-pair high-performance liquid chromatographic separation and determination of tropane alkaloids in Chinese solanaceous plants
by L.-Y. He, G.-D. Zhang and Y.-Y. Tong (Beijing, China) and K. Sagara, T. Oshima and T. Yoshida (Saitama, Japan) (Received July 10th, 1989) 428

Rapid quantification of paraquat and diquat in serum and urine using high-performance liquid chromatography with automated sample pretreatment
by I. Nakagiri, K. Suzuki, Y. Shiaku, Y. Kuroda, N. Takasu and A. Kohama (Okayama, Japan) (Received July 7th, 1989) 434

High-performance liquid chromatographic determination of phenoxyalkanoid acid herbicides using iron(II) 1,10-phenanthroline as a mobile phase additive
by M. Fayyad, M. Alawi and T. El-Ahmad (Amman, Jordan) (Received July 10th, 1989) . 439

Liquid chromatographic determination of N-methylcarbamate pesticides using a single-stage post-column derivatization reaction and fluorescence detection
by B. D. McGarvey (Vineland Station, Canada) (Received June 13th, 1989) 445

High-performance liquid chromatographic screening method for low levels of nicarbazin in eggs with off-line cartridge sample clean-up
by M. H. Vertommen, A. van der Laan and H. M. Veenendaal-Hesselman (Doorn, The Netherlands) (Received May 27th, 1989) 452

High-performance liquid chromatographic separation of indandione rodenticides
by J. E. Houglum, R. D. Larson and R. M. Neal (Brookings, SD, U.S.A.) (Received July 18th, 1989) 458

Reversed-phase high-performance liquid chromatography, a tool for the study of bichromophoric systems including polymethylenic linking bridges
by J.-L. Décout (Grenoble, France), B. Mouchel (Villeneuve d'Ascq, France) and J. Lhomme (Grenoble, France) (Received June 7th, 1989) 461

Thin-layer chromatography on polyacrylonitrile. I. effect of the *cis–trans* configuration of cobalt(III) complexes on their R_F values
by T. J. Janjić, D. M. Milojković, Ž. J. Arbutina, Ž. Lj. Tešić and M. B. Ćelap (Belgrade, Yugoslavia) (Received June 19th, 1989) 465

Effect of the chelate ring size of diamine cobalt(III) complexes on their R_F values obtained by paper chromatography
by Ž. Lj. Tešić, T. J. Janjić, M. J. Malinar and M. B. Ćelap (Belgrade, Yugoslavia) (Received May 12th, 1989) 471

Letter to the Editor

2-Trichloromethylbenzimidazole, a selective chromogenic reagent for the detection of some azines on thin-layer plates. Addendum
by L. Konopski and B. Jerzak (Warsaw, Poland) (Received July 28th, 1989) 477

Book Reviews

Natural products isolation, separation methods for antimicrobials, antivirals and enzyme inhibitors (Journal of Chromatography Library Series, Vol. 43) (edited by G. H. Wagman and R. Cooper), reviewed by V. Betina 480

Gas chromatography and lipids (by W. W. Christie), reviewed by A. Kuksis 483

Author Index 485

In articles with more than one author, the name of the author to whom correspondence should be addressed is indicated in the article heading by a 6-pointed asterisk (*)